

DOCKET: CU-4117

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Tomoaki Abe et al

TITLE: OIL RING

AMENDED CLAIMS

1-6 (cancelled)

7. (new) An oil ring formed into cross-section substantially of an I-shape that two rails are connected at a columnar portion thereof, wherein a sliding projection formed in each of the two rails comprises an outer side surface of sliding projection which forms an outer portion of the sliding projection, a inner side surface of sliding projection which forms an inner portion of the sliding projection, and a sliding surface which slides on a cylinder inner wall and forms a tip end of the sliding projection;

wherein a taper angle of the outer side surface of sliding projection is in a range of 10° to 60°; and

an outer edge portion, where the outer side surface of sliding projection and the sliding surface are joined to each other, is formed into a curved surface, and the sliding surface has a curved surface sliding portion which is joined to the outer side surface of sliding projection and formed into a gently curved surface.

8. (new) An oil ring formed into cross-section substantially of an I-shape that two rails are connected at a columnar portion thereof, wherein a sliding projection formed in each of the two rails comprises an outer side surface of sliding projection which forms an outer portion of the sliding projection, a inner side surface of sliding projection which forms an inner portion of the sliding projection, and a sliding surface which slides on a cylinder inner wall and forms a tip end of the sliding projection;

wherein at least a portion of an outer edge portion, where the outer side surface of sliding projection and the sliding surface are joined to each other, of the outer side surface of sliding projection is formed into a curved surface; and

the sliding surface has a curved surface sliding portion which is joined to the

outer side surface of sliding projection and formed into a gently curved surface.

9. (new) The oil ring according to claim 7, wherein the curved surface sliding portion and the inner side surface of sliding projection are joined to each other.

10. (new) The oil ring according to claim 8, wherein the curved surface sliding portion and the inner side surface of sliding projection are joined to each other.

11. (new) The oil ring according to claim 7, wherein a radial width of the oil ring, which is from the portion where the curved surface sliding portion and the outer side surface of sliding projection are joined to each other to the portion where the sliding surface and the inner side surface of sliding projection are joined to each other, is from $3\mu\text{m}$ to $100\mu\text{m}$.

12. (new) The oil ring according to claim 8, wherein a radial width of the oil ring, which is from the portion where the curved surface sliding portion and the outer side surface of sliding projection are joined to each other to the portion where the sliding surface and the inner side surface of sliding projection are joined to each other, is from $3\mu\text{m}$ to $100\mu\text{m}$.

13. (new) The oil ring according to claim 7, wherein an inner edge portion where the inner side surface of sliding projection and the sliding surface are joined to each other is formed into a curved surface, and the sliding surface has an inner curved surface sliding portion which is joined to the inner side surface of sliding projection and formed into a gently curved surface.

14. (new) The oil ring according to claim 8, wherein an inner edge portion where the inner side surface of sliding projection and the sliding surface are joined to each other is formed into a curved surface, and the sliding surface has an inner curved surface sliding portion which is joined to the inner side surface of sliding projection and formed into a gently curved surface.

15. (new) The oil ring according to claim 7, wherein a taper angle of the inner side surface of sliding projection is in a range of 0° to 30° .

16. (new) The oil ring according to claim 8, wherein a taper angle of the inner side surface of sliding projection is in a range of 0° to 30° .